



SPHERE

COOLING SYSTEM

PRECISION COOLING.
UNMATCHED PERFORMANCE.



TRADITIONAL COOLING ISSUES

Traditional cooling systems waste resources,
cost too much, and harm the environment.



Extreme Resource Waste

Consume 30-50% of facility
electricity and vast amounts
of water.



High Maintenance Costs

Frequent service, corrosion,
scaling, and chemical
treatment drive up
expenses.



Pollution & Health Risks

Cause wastewater pollution
and health hazards
including Legionella
outbreaks.

THE SPHERE SOLUTION

SPHERE redefines industrial cooling with a smarter, more efficient, and environmentally friendly approach.



Smart Hybrid Design

Combines air, water, and direct evaporation for peak heat transfer efficiency



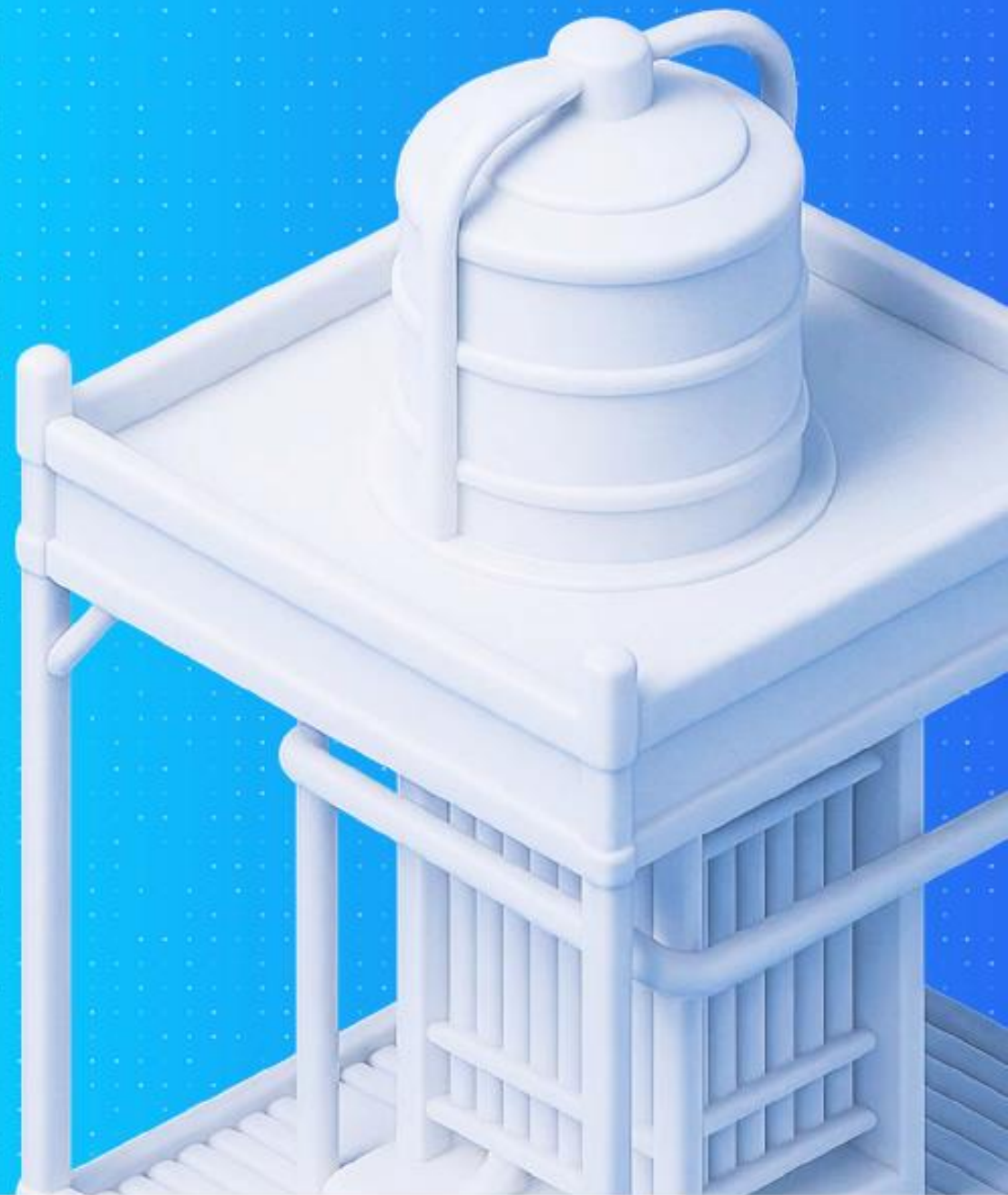
Sealed & Stable Circuit

Process liquid remains fully isolated, ensuring purity and consistent performance



Energy & Maintenance Savings

Delivers up to 90% energy reduction with minimal upkeep across varied temperatures



HOW SPHERE COOLS DIFFERENTLY

SPHERE uses a 4-step process to efficiently manage heat and ensure stable cooling.



Heating

Hot liquid enters the heat exchanger, transferring heat to the heat-exchanger.



Cycle Completion

Cooled liquid returns, hot air exits, and excess water is recycled.



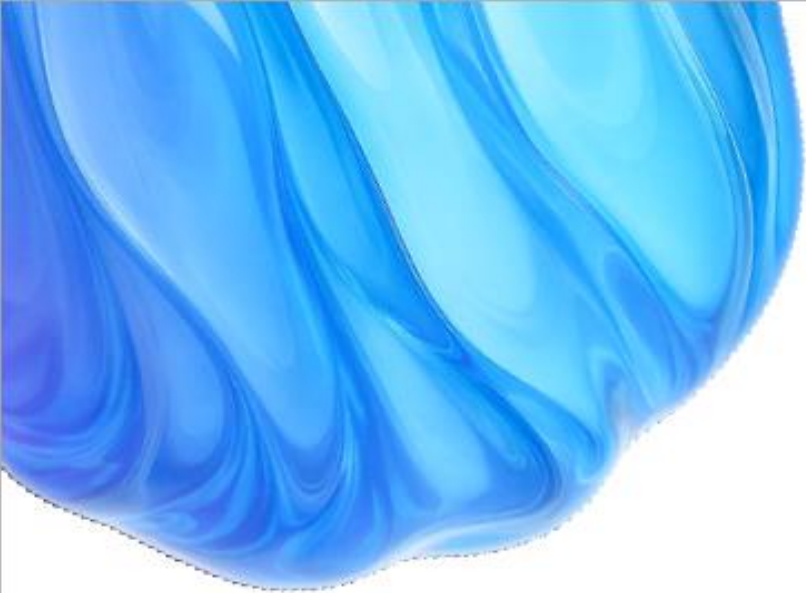
Heat Absorption

RO water spray evaporates, capturing heat and transferring it to the rising air.



Continuous Efficiency

Fully automated system ensures stable, reliable and efficient cooling.



SPHERE COOLING PROCESS VISUALIZATION

Internal operation process of the SPHERE system - heat transfer and energy efficiency in a controlled dynamic process.

Continuous Liquid Flow

Process liquid transfers heat to the heat exchanger walls.

Natural Air Intake

Air enters from the bottom and rises upward.

Clean Water Supply

Clean water is supplied to the system for cooling purposes.

Heat Exchanger Wrapping

A thin layer of cooling water wraps around the exchanger for efficient heat absorption.

Direct Evaporation

Water evaporates directly from the exchanger, absorbing heat and transferring it to the rising air.

Water Recycling and Heat Discharge

Remaining water is recycled back to the system and heat is discharged through hot air exhaust.

Traditional

— VS —

SPHERE

Cumbersome industrial cooling
process vs SPHERE solution



Direct Process Connection
eliminating auxiliary
equipment



**Simplicity & Minimal
Maintenance**



**Full Temperature
Adaptation**

According to system needs,
operates at any temperature

OPEX ADVANTAGES

Low Operating Costs, Easy Maintenance,
and Smart Water Usage.



Smart Water Usage

Efficient cooling system with smart water control.



Easy Maintenance

Requires minimal water treatment, no corrosion, scaling, or Legionella risk, ensuring smooth operation.



Low Operating Costs

Reduced water, electricity, and service consumption makes it one of the most economical systems to maintain.

COMPETITIVE ADVANTAGES



Environmentally Friendly

Lower energy consumption, reduced CO₂ emissions, simpler construction, and fewer chemicals make it a green solution.



Reliable in All Climates

Designed and proven to perform consistently well in extreme heat and freezing cold conditions.



Clean, Closed Loop

Uses only clean, uncontaminated water in a closed loop, protecting equipment and ensuring stability.



Operates Water-Free

Automatic dry mode for cold weather or cleaning, improving water savings and ease of maintenance.



Handles Any Temperature

Capable of receiving very hot liquids directly without causing system damage.

Industries That
Benefit from
SPHERE

Heavy
Industry



Data
Centers



Food &
Beverage



Power
Generation



Industrial
HVAC



Plastics



First SPHERE
Implementation:

SAGIV PLANT

90%

ENERGY
CONSUMPTION
SAVINGS



Setting a new
benchmark for industrial
cooling efficiency.



Second SPHERE
Implementation:

ICL DEAD SEA WORKS

SPHERE revolutionized industrial cooling at ICL, delivering major efficiency gains and operational simplification.

Direct High-Temp Cooling

Cools process water from 80°C to 35°C directly at the source.

Eliminated Far Transport

Replaced a cumbersome system that required transporting process water over 3 kilometers across the plant.

No Auxiliary Reservoirs

Removed the dependency on an additional reservoir previously used for cooling hot process water, streamlining operations.



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SPHERE.

REDEFINING COOLING.
MAKING A DIFFERENCE.

Discover cutting-edge cooling solutions at SPHERE,
unlocking exceptional performance and
environmental stewardship across all industries.